

ABSTRACTS

Edited by David E. Zitarelli

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Books for abstracting and eventual review should be sent to this department. Materials should be sent to Prof. David E. Zitarelli, Department of Mathematics, Temple University, Philadelphia, PA 19122, U.S.A. (E-mail: ZIT@VM.TEMPLE.EDU)

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In order to facilitate reference and indexing, entries are given abstract numbers which appear at the end following the symbol #. A triple numbering system is used: the first number indicates the volume, the second the issue number, and the third the sequential number within that issue. For example, the abstracts for Volume 20, Number 1, are numbered: 20.1.1, 20.1.2, 20.1.3, etc.

For reviews and abstracts published in Volumes 1 through 13 there are an *author index* in Volume 13, Number 4, and a *subject index* in Volume 14, Number 1.

The initials in parentheses at the end of an entry indicate the abstractor. In this issue there are abstracts by Ronald Calinger (Washington, DC), Stefan Catoiu (Philadelphia), Karine Chemla (Paris), John G. Fauvel (Milton Keynes), Paulus Gerdes (Maputo), Ivor Grattan-Guinness (Middlesex), Leon Harkleroad (Poughkeepsie, NY), Calvin Jongsma (Sioux Center, IA), Herbert E. Kasube (Peoria, IL), Elena A. Marchisotto (Northridge, CA), Ivica Martinović (Dubrovnik), Adrian Rice (Middlesex), Dennis L. Simms (London), and David E. Zitarelli.

Aballagh, Mohamed. *The Raising of the Veil on the Operation of Calculation of Ibn al-Bannā of Marrakesh* [in Arabic], Dhar El-Mehrez: Publications of the Faculty of Letters and Human Sciences, 1994, 360 pp. The author's 1988 doctoral dissertation on a commentary on the book *Digest of Operations on Calculation* by the 14th-century Maghrebian mathematician, Ibn al-Bannā. See the review by Ahmed Djebbar in *Historia Mathematica* 25 (1998), 86–88. (DEZ) #25.3.1

Adachi, Norio. The Dawn of Mathematical Philosophy, *Historia Scientiarum* 5 (1995), 1–23. The author attempts to “throw light upon how purely deductive mathematics was born” in the context of Greek customs and social backgrounds. He notes the importance of rhetoric and contests as well as the philosophy of the Pythagoreans. As characteristics of mature Greek mathematics, in particular Euclid's *Elements*, the author discerns “deductionism, archeism (fundamentalism), and abstractionism” and analyzes their origins. See the review by Victor V. Pumbuccian in *Mathematical Reviews* 97j:01002. (HEK) #25.3.2

Aïssani, Djamil. Mathematics in Medieval Bougie and Fibonacci, in Leonardo Fibonacci, *Il tempo, le opere, l'eredità scientifica*, Pisa: Pacini Editore, 1994, pp. 67–82. The article presents the political, cultural, and economic context in which scientific activities in Bougie were developed during the Middle Ages. It describes certain aspects of mathematical production in this city (science of calculation and algebra), and it concludes with remarks about Fibonacci, who studied there. (PG) #25.3.3

Albers, Donald J. An Interview with Lars V. Ahlfors, *College Mathematics Journal* 29 (1998), 82–92. An interview with the 1936 Fields Medal winner Lasse Valerian Ahlfors (1907–1996). A student of

Ernst Lindelöf and Rolf Nevanlinna in Helsinki, Ahlfors defined the subject of complex function theory in the mid-20th century. (DEZ) #25.3.4

Al-Sijzī. *Al-Sijzī's Treatise on Geometrical Problem Solving*, Tehran: Fatemi Publishing Co., 1996, xiv + 36 pp., paperbound. This important work of the Islamic mathematician Al-Sijzī has been translated and annotated by Jan P. Hogendijk. A Persian translation has been supplied by Mohammad Bagheri. This 10th-century text resembles G. Polya's *How to Solve It*. (DEZ) #25.3.5

Antoci, Salvatore, and Liebscher, Dierck-E. The Third Way to Quantum Mechanics Is the Forgotten First, *Annales Fondation Louis de Broglie* **21** (1996), 349–368. The authors draw attention to the fact that the ideas that later led to the Feynman formulation of quantum physics in terms of integrals over histories were anticipated in a very explicit fashion by Gregor Wentzel as early as 1924. The authors sketch Wentzel's derivation and conjecture answers to the question of why this article was never associated with the development of the path integral approach to quantum mechanics. See the review by Kirill V. Kransnov in *Mathematical Reviews* **97j**:01027. (HEK) #25.3.6

Arcavi, Abraham. See #25.3.91.

Atten, Michel. Poincaré et la tradition de la physique mathématique française, in Jean-Louis Greffe, Gerhard Heinzmann, and Kuno Lorentz, eds., *Henri Poincaré: Science et philosophie*, Berlin: Akademie Verlag, 1996, pp. 35–44. A study of the negligible effects of Poincaré's approach to physics that emerged from his decade of teaching the subject, from 1886 to 1896. (DEZ) #25.3.7

Bagheri, Mohammad. See #25.3.5.

Ball, Joseph A. See #25.3.64.

Banks, David L. A Conversation with I. J. Good, *Statistical Science* **11** (1996), 1–19. Explores the life of Irving John Good, the statistician who worked with Alan Turing. Good is credited with assisting the Allies in deciphering two main secret codes used by the German Army and Navy, using early electromagnetic and electronic computers and applied Bayesian statistics. (EAM) #25.3.8

Barbieri, Francesco, and Degani, Franca Cattelani, eds. *Catologo della corrispondenza di Paolo Ruffini*, Pisa: Edizioni ETS, 1997, 606 pp., paperbound, L 60,000. A catalog of the correspondence of the Italian physician and algebraist, Paolo Ruffini. (DEZ) #25.3.9

Barrow-Green, June. Joint Mathematics Meetings, *BSHM Newsletter* **36** (1998), 19–21. Report of the activities on the history of mathematics held at the January, 1998, AMS/MAA annual meeting held in Baltimore, as well as a one-day conference in honor of the retirement of the historian of mathematics, Ubiratan D'Ambrosio. (DEZ) #25.3.10

Barrow-Green, June. Teaching the History of Mathematics Using the World Wide Web, *BSHM Newsletter* **36** (1998), 60–61. Report on a mini-course on searching for material on the history of mathematics and developing study skills using the Internet, taught at the MAA annual meeting in Baltimore in January 1998. (DEZ) #25.3.11

Basarab-Horvath, Peter. See #25.3.83.

Belna, Jean-Pierre. *La Notion de nombre chez Dedekind, Cantor, Frege: Théories, conceptions, et philosophie*, Paris: Librairie philosophique J. Vrin, 1996, 376 pp., paperbound, FF 198. There is a preface by Claude Imbert. See also #25.2.12. (DEZ) #25.3.12

Berggren, J. Lennart; Borwein, Jonathan; and Borwein, Peter. *Pi: A Source Book*, New York: Springer-Verlag, 1997, 716 pp., hardbound, \$59.95. The first source book ever written on π , it documents the history of π from the dawn of mathematical time to the present. Included are a selection of the

mathematical literature of four millennia, a variety of historical studies or writings on its cultural meaning and significance, and additional treatments on π that are fanciful, satirical, and/or whimsical. (DEZ) #25.3.13

Berggren, J. Lennart. *See also* #25.3.36.

Berndt, Bruce; Chan, Heng Huat; and Zhang, Liang-Cheng. Ramanujan's Association with Radicals in India, *The American Mathematical Monthly* **104** (1997), 905–911. Descriptions of attempts and methods used to establish how Ramanujan calculated 107 class invariants. G. N. Watson's suggestion for one invariant—"he guessed it"—is rejected and replaced by a plausible proof. (DEZ) #25.3.14

Bernstein, Sergei N. On the V. A. Markov Theorem, *East Journal on Approximations* **2** (1996), 245–251. Translation from Russian of a classical 1938 paper by S. N. Bernstein providing a simplified proof of Markov's theorem, first published in 1882 and later, in German, in 1916. (DEZ) #25.3.15

Biard, Joel, and Rashed, Roshdi, eds. *Descartes et le Moyen Âge*, Paris: Librairie philosophique J. Vrin, 1997, 378 pp., FF 240. A collection of papers presented at the Sorbonne in June, 1996, to commemorate the fourth centenary of the birth of Descartes. (DEZ) #25.3.16

Bienaymé, Olivier. *See* #25.3.20.

Bkouche, Rudolf. La naissance du projectif: De la perspective à la géométrie projective, in Roshdi Rashed, ed., *Mathématiques et philosophie de l'antiquité à l'âge classique*, Paris: Éditions du CNRS, 1991, pp. 239–285. This paper documents the history and philosophy of the 17th- and 18th-century perspectivist movement and its influence on the birth of modern projective geometry in the 19th century. *See the review by Victor V. Pambuccian in Mathematical Reviews* **97j**:01011. (HEK) #25.3.17

Bölling, Reinhard. Karl Weierstraß (1815–1897) zum Gedenken [in German and English], *Journal für die reine und angewandte Mathematik* **483** (1997), i–iii. Reports on the discovery of an old photo of a recently rediscovered portrait of Weierstrass painted by Conrad Fehr in 1895. (EAM) #25.3.18

Borel, Armand. Twenty-Five Years with Bourbaki, *Notices of the American Mathematical Society* **45** (1998), 373–380. Personal recollections of the Swiss author's years as a close observer and then a member of Bourbaki. Borel provides two reasons for the group's prodigious output in spite of seemingly stifling principles. (DEZ) #25.3.19

Bornet, G. *See* #25.3.51.

Borwein, Jonathan. *See* #25.3.13.

Borwein, Peter. *See* #25.3.13.

Bottazzini, Umberto. *See* #25.3.35.

Bru, Bernard; Bru, Marie-France; and Bienaymé, Olivier. La statistique critiquée par le calcul des probabilités: Deux manuscrits inédits d'Irénée Jules Bienaymé, *Revue d'histoire des mathématiques* **3** (1997), 137–239. An analysis of two unpublished manuscripts of Irénée-Jules Bienaymé, uncovered in family archives, that offer a critique of statistics based on probability-calculus grounds. The manuscripts show Bienaymé defending the Laplacian statistical theory and adding to it. (DEZ) #25.3.20

Bryden, D. J. *See* #25.3.107.

Bru, Marie-France. *See* #25.3.20.

Burnett, Charles, and Pingree, David, eds. *The Liber Aristotelis of Hugo of Santalla*, London: Warburg Institute, 1997. (RC) #25.3.21

Castells, Margarita, and Samsó, Julio. Seven Chapters of Ibn al-Šaffār's Lost Zīj, *Archives internationales d'histoire des sciences* **45** (1995), 229–262. Supplies six chapters and part of a seventh chapter of a Judeo-Arabic manuscript (i.e., Arabic text written with the Hebrew alphabet), as well as original chapters transcribed in the Arabic alphabet, of the work of the Islamic mathematical astronomer ʿAbd

al-Qasim ibn al-Šaffar (d. 1035). The bulk of the work of this medieval Spanish astronomer has been lost. The fragments that are published here deal with astronomical procedures such as the calculation of lunar and solar eclipses, and the determination of longitude and lunar parallax. The authors provide extensive mathematical commentary. See the review by George Saliba in *Mathematical Reviews* **97k**:01005. (EAM) #25.3.22

Chan, Heng Huat. See #25.3.14.

Charatonik, Janusz J. Tadeusz Maćkowiak (1949–1986) [in Polish], *Wiadomości Matematyczne* **31** (1995), 151–162. A biography of the Polish mathematician, Tadeusz Maćkowiak, followed by a list of his publications. (DEZ) #25.3.23

Chemla, Karine, ed. *La Valeur de L'exemple: Perspectives chinoises*, Saint-Denis: Presses univ. de Vincennes, 1997, 156 pp., paperbound, FF 90. This work contains four papers that address the issue of reasoning by way of examples from a different vantage point, one of which concerns mathematics. The editor's "What is a problem in the mathematical tradition of ancient China?" shows that the problems in the Han classic, *Nine Chapters on Mathematical Procedures*, were read as "examples" by the commentators, and that they did so as part of the traditional Confucian conception of learning. Hence mathematics serves as an illustration of a field worked out on the basis of examples, and one can describe the practice of reasoning by examples that were designed to cultivate mathematical activity. (KC) #25.3.24

Chern, S. S.; Kailath, Thomas; Kostant, Bertram; Moore, Calvin C.; and Tsao, Anna. Louis Auslander (1928–1997), *Notices of the American Mathematical Society* **45** (1998), 390–395. Reflections on the life and work of Lou Auslander, who taught at several American universities and worked in several fields of mathematics. (DEZ) #25.3.25

Christianidis, Jean. Une interprétation byzantine de Diophante, *Historia Mathematica* **25** (1998), 22–28. The author develops a new interpretation, based on an earlier one from Maximus Planudes in the 13th century, centered on the notion of proportion. The interpretation applies to all cases of equations with two unknowns solved by Diophantus. (DEZ) #25.3.26

Chung, Kai Lai. Probability and Doob, *The American Mathematical Monthly* **105** (1998), 28–35. An exposition of the contributions of Joseph L. Doob to probability, especially stochastic processes. See also #24.1.58. (DEZ) #25.3.27

Cohn, Paul M. J. J. Sylvester, One of the "Invariant Twins," *De Morgan Association Newsletter* **5** (1997), 3–4. An account of the life and work of James Joseph Sylvester, written for alumni of the University College London Mathematics Department. (ACR) #25.3.28

Cohn, Paul M., and Perkins, Sarah. A Celebration of William Burnside, *BSHM Newsletter* **36** (1998), 3–9. The authors report separately on a meeting held in October 1997 to commemorate the centenary of the publication of William Burnside's classical book, *Theory of Groups of Finite Order*. There are also abstracts of the seven papers presented at the meeting. (DEZ) #25.3.29

Cooke, Roger L. *The History of Mathematics: A Brief Course*, New York: Wiley, 1997, xiii + 530 pp., hardbound, \$59.95. A textbook on the history of mathematics, aimed for undergraduate mathematics majors and prospective secondary teachers, that follows a fairly standard chronology with an emphasis on issues rather than biographies. An unusual feature is a section on Roman architecture, engineering, and geography. The final chapter, "Contemporary Mathematics," contains sections on professionalization, developments in the U.S. and Canada, Nazi Germany, and democratization. The author's knowledge of Russian has also enabled him to treat contributors not generally covered in comparable texts. (DEZ) #25.3.30

Cooke, Roger L. See also #25.3.97.

Corry, Leo; Renn, Jürgen; and Stackel, John. Belated Decision in the Hilbert–Einstein Priority Dispute, *Science* **278** (1997), 1270–1273. An examination of David Hilbert's proofs for the general theory of

relativity reveals that he added crucial elements, perhaps after seeing Einstein's results. The two had consulted frequently on the problem. (DEZ) #25.3.31

Craik, Alex D. D. Geometry, Analysis, and the Baptism of Slaves: John West in Scotland and Jamaica, *Historia Mathematica* **25** (1998), 29–74. A detailed description of the life and work of the Scottish mathematician, John West (1756–1817), who taught at St. Andrews until emigrating to Jamaica in 1784 in search of gainful employment. West became a rector in the Church of England, doing mathematics in isolation in his spare time. This article also examines two posthumously published works of West that “give perhaps the earliest full account in English of the ‘continental’ style of calculus” [p. 70.] (DEZ) #25.3.32

Crépel, Pierre. See #25.3.113.

Cromwell, Peter R. *Polyhedra*, Cambridge/New York: Cambridge Univ. Press, 1997, xiv + 451 pp., hardbound, \$44.95. This book documents the various ways that polyhedra have occurred throughout history, from ancient Egypt and China, through classical Greece, up to modern group theory. It combines the historical development with a rigorous treatment of the mathematics involved. (DEZ) #25.3.33

Dale, A. I. See #25.3.70 and #25.3.71.

De Berg, Kevin C. The Development of the Concept of Work: A Case Where History Can Inform Pedagogy, *Science & Education* **6** (1997), 511–527. Historical analysis, particularly of the contributions of Smeaton and Daniel Bernoulli, may help us understand and resolve current difficulties in the teaching and learning of the concept of work (as “force \times distance”) and its relation to kinetic and potential energies. (JGF) #25.3.34

Degani, Franca Cattelani. See #25.3.9.

De Lucia, Paolo; Ferraro, Giovanni; and Palladino, Franco. *Alcuni tratti della matematica napoletana da prima a dopo la repubblica partenopea del 1799* [Neapolitan Mathematics Around the Time of the Parthenopean Republic of 1799], *Rendiconti dell'Accademia della scienze fisiche e matematiche, Serie IV, Napoli* **62** (1995), 225–274. A detailed survey of mathematical research conducted at Naples in the second half of the 18th century, especially around the time of the Parthenopean Republic of 1799. See the review by Umberto Bottazzini in *Mathematical Reviews* **97j**:01021. (DEZ) #25.3.35

De Young, Gregg. Ex aequali ratios in the Greek and Arabic Euclidean Traditions, *Arabic Sciences and Philosophy: A Historical Journal* **6** (1996), 163–165, 167–213. The author begins with a brief summary of the sometimes confusing state of current views on the various threads that make up the Arabic tradition of Euclid's *Elements*. He then follows the ideas of ratio ex aequali and perturbed proportion through the *Elements* in both the Greek and Arabic traditions. See the review by J. L. Berggren in *Mathematical Reviews* **97j**:01006. (HEK) #25.3.36.

Dhombres, Jean. Le continu baroque, ou comment ne pas jouer discret, in Jean-Michel Salanskis and Hourya Sinaceur, eds., *Le labyrinthe du continu*, Paris: Springer, 1992, pp. 47–60. An explication of the quadrature of the hyperbola by Gregory of Saint-Vincent and a description of how Gregory overcame the Euclidean distinction between the continuous and the discrete. (DEZ) #25.3.37

Dixmier, Jacques, et al. Lajos Pukánsky (1928–1996), *Notices of the American Mathematical Society* **45** (1998), 492–499. Five commentaries on aspects of the life and work of the Hungarian mathematician Lajos Pukánsky, who spent most of his professional career at the University of Pennsylvania. Pukánsky is regarded as “the world's foremost expert on solvable Lie groups” (p. 492). (DEZ) #25.3.38

Djebbar, Ahmed. Les activités mathématiques dans le Maghreb Central, Université de Paris-Sud, 1997, preprint No. 97, 43 pp. A description of conditions under which there emerged and developed a series of mathematical activities in some cities in the central Maghreb between the 9th and the 15th centuries. The description includes links that were woven between these cities and other scientific centers in the west Mediterranean. The study also presents some mathematicians from this region of the Maghreb by specifying their known contributions. (PG) #25.3.39

Djebbar, Ahmed. *See also* #25.3.1.

Ewald, William, ed. *From Kant to Hilbert: A Source Book in the Foundations of Mathematics*, Oxford: Clarendon Press, 1996, vol. 1: xvii + 694 pp., vol. 2: xvi + 706 pages, hardbound; £195. The editor, a professor of law and philosophy at the University of Pennsylvania, has assembled a selection of the most important works on the foundations of mathematics in the period from Immanuel Kant's *Critique of Pure Reason* to the work of David Hilbert. (DEZ) #25.3.40

Fauvel, John. James Joseph Sylvester: Poet, *De Morgan Association Newsletter* 5 (1997), 5–7. An analysis of the motivation behind the poetry of J. J. Sylvester, in which the author argues that, while Sylvester's poetical works may seem somewhat antiquated and melodramatic to the modern reader, they offer a unique insight into the character and psychological makeup of this deeply emotional and highly articulate man. (ACR) #25.3.41

Feng, Bin Lu. *See* #25.3.124.

Ferraro, Giovanni. *See* #25.3.35.

Field, J. V. *The Invention of Infinity: Mathematics and Art in the Renaissance*, Oxford/New York: Oxford Univ. Press, 1997, xii + 250 pp., hardbound; £29.50, \$35. This book presents the interface between mathematics and art by examining the time when artists were merely “craftsmen” and their practical mathematics was separate from the mathematics of scholars. It shows how the craftsmen's discoveries went beyond the achievements of the ancient Greeks, with infinity acquiring precise mathematical meaning. (DEZ) #25.3.42

Fox, Robert. *See* #25.3.47.

Gårding, Lars. *Mathematics and Mathematicians: Mathematics in Sweden Before 1950*, Providence: American Mathematical Society, 1998, xiii + 288 pp., \$75.00. The author's own translation of his 1994 Swedish book into English. Combining history with mathematical details, the book begins with the early 18th century but concentrates on the years 1860–1950. In addition to Mittag-Leffler and Fredholm, many less-known figures are discussed. (LH) #25.3.43

Gårding, Lars. *Some Points of Analysis and Their History*, Providence: American Mathematical Society, 1997, 88 pp., softbound, \$16. A collection of essays on the history and the proofs of some 20th-century results on analysis and partial differential operators, mostly associated with Swedish mathematicians. (DEZ) #25.3.44

Garber, David. *See* #25.3.117.

García, José Barrios. *Number Systems and Calendars of the Berber Populations of Grand Canary and Tenerife in the 14th–15th Centuries*, Doctoral Thesis, University of La Laguna (Tenerife, Spain), 1997. An investigation of the number systems and calendars from the Grand Canary Island and Tenerife Island. The thesis directors were F. Estévez (Department of Anthropology, University of La Laguna) and M. Ziolkowski (Department of Historical Anthropology, Warsaw University, Poland). For more information on the thesis see the complete abstract in *AMUCHMA Newsletter* 19 (1997), 5–7. (DEZ) #25.3.45

Gerdes, Paulus. *Ethnomathematik dargestellt am Beispiel der Sona Geometrie*, Heidelberg/Berlin/Oxford: Spektrum Verlag, 1997, 433 pp. German language edition of the three volumes on the geometry of the “sona” sand drawing tradition in southern-central Africa. The original version (in Portuguese) was published by the Universidade Pedagógica, Maputo, in 1993–1994. A French version was published by L'Harmattan in 1995. (DEZ) #25.3.46

Gillispie, Charles Coulson. *Pierre-Simon Laplace, 1749–1827: A Life in Exact Science*, Princeton Univ. Press, 1997, 304 pp., hardbound, \$49.50. The development of the research program of Pierre-Simon Laplace and his participation in the Academy of Science during the last decades of the Old Regime and into the early years of the French Revolution. There is also an account by Robert Fox of Laplace's

attempt to form a school of young physicists who would extend the Newtonian model from astronomy to physics, and a summary by Ivor Grattan-Guinness of the history of Laplace's role in the transform named after him. (DEZ) #25.3.47

Givant, Steven R., and Huber-Dyson, Verena. Alfred Tarski, a Kaleidoscope of Personal Impressions [in Polish], *Wiadomości Matematyczne* **32** (1996), 95–127. A translation from English to Polish by A. Morawiec, this paper is not an official biography, but rather a collage of personal impressions of the life and work of Alfred Tarski. Givant is a professor at Mills College who had worked closely with Tarski. See also #19.1.37 and *Mathematical Reviews* **97k**:01030. (EAM) #25.3.48

Goldman, Jay. *The Queen of Mathematics: A Historical Guide to Number Theory*, Natick, MA: AK Peters, 1996, 552 pp., hardbound, \$59.95. A textbook that examines number theory as it emerged in the 17th through 19th centuries, leading to an understanding of today's research problems on the basis of their historical evolution. The work of Fermat, Euler, Lagrange, Legendre, and Gauss is included. (DEZ) #25.3.49

Goldstein, Catherine; Gray, Jeremy; and Ritter, Jim, eds. *L'europe mathématique. Mythes, histoires, identités*, Paris: Éditions de la Maison des Sciences de l'Homme, 1996, 575 pp., 190 FF. A collection of essays by 26 scholars from 11 countries presenting various aspects of the European birth and development of mathematics. (DEZ) #25.3.50

Grattan-Guinness, Ivor, and Bornet, G., eds. *George Boole—Selected Manuscripts on Logic and Its Philosophy*, Boston/Basel/Berlin: Birkhäuser, 1997, 305 pp., hardbound, \$39.95. An edited selection of essays written by George Boole (1815–1864) after the publication of his book, *An Investigation of the Laws of Thought*, in 1854. The editors relate the essays to Boole's publications and the historical context of his time and describe their strange history. The essays were left to the Royal Society Library by Boole's wife. Some were meant for a third book on the “philosophy of logic,” which Boole was unable to complete. Some letters are also included, mainly with Cayley. (DEZ) #25.3.51

Grattan-Guinness, Ivor. See also #25.3.47.

Gray, Jeremy. Constructions, Reconstructions, and Images in History of the Body of Mathematics, *BSHM Newsletter* **36** (1998), 17–18. Report of a meeting held in September 1997 at the Centre international de recherches mathématiques at Luminy, near Marseilles, to debate such issues as “progress” and “revolution” in mathematics. (DEZ) #25.3.52

Gray, Jeremy. See also #25.3.50.

Guicciardini, Niccolò. *Newton: Un filosofo della natura e il sistema del mondo*, Milan: Le scienze, vol. 1(2) (April, 1998), 108 pp. The latest in a series of biographical surveys of major scientists published by the Italian arm of *Scientific American*. Fine perceptive text on all main aspects of Newton's life and works, with superb layout and illustrations (including several manuscripts) in the tradition of the parent magazine. (IGG) #25.3.53

Harbili, Anissa. *Mathematics Education in Tlemcen in the 14th Century through the Commentary of al-'Uqbānī (d. 811/1408)*, Master's Thesis, École normale supérieure d'Alger (Algeria), 1997. The first part of the thesis presents the life and work of the Maghrebian mathematician, al-'Uqbani, and the mathematical activities in Tlemcen (Algeria) during the 14th century. The second part analyzes his commentary on the famous manual of Ibn al-Banna (d. 1321) entitled “Talkhīṣ a'māl al-ḥisāb” (“Manual of Arithmetic Operations”). The third and final part is a critical edition of the only surviving copy of the work of al-'Uqbani. The thesis director was Ahmed Djebbar (Université Paris-Sud, Algeria). (DEZ) #25.3.54

Hayashi, Takao, and Kusuba, Takanori. Twenty-One Algebraic Normal Forms of Citrabhānu, *Historia Mathematica* **25** (1998), 1–21. An exposition of verses by Citrabhānu, a 16th-century mathematician from Kerala in South India, on the 21 algebraic normal forms, which are pairs of simultaneous equations in two unknowns. (DEZ) #25.3.55

Henderson, James P. *Early Mathematical Economics: William Whewell and the British Case*, Lahnam, MD: Rowman and Littlefield Publishers, 1996. (RC) #25.3.56

Herreman, Alain. Le statut de la géométrie dans quelques textes sur l'homologie, de Poincaré aux années 1930, *Revue d'histoire des mathématiques* **3** (1997), 241–293. An investigation of the place and status of geometry in various works on homology from Poincaré to the 1930s. The terms “geometrical content” and “geometrical meaning” are introduced to study contributions by Poincaré, Veblen, Alexander, Vietoris, and Čech. (DEZ) #25.3.57

Hilpinen, Risto. See #25.3.58.

Hinkley, P. L. See #25.3.108.

Hintikka, Jaakko. See #25.3.58.

Hogendijk, Jan P. See #25.3.5.

Houser, Nathan; Roberts, Don D.; Van Evra, James, eds. *Studies in the Logic of Charles Sanders Peirce*, Bloomington: Indiana Univ. Press, 1997, xvi + 654 pp., \$49.95. A collection of writings on the logic of the American mathematician, C. S. Peirce. There is a foreword by Jaakko Hintikka and Risto Hilpinen. (DEZ) #25.3.58

Howarth, Richard J. Sources for a History of the Ternary Diagram, *The British Journal for the History of Science* **29** (1996), 337–356. Discusses the history of barycentric coordinates in the plane, tracing the 18th-century origin of the idea of graphically representing data in the plane with three variables as a means of specifying colors in terms of their relative proportions of three primary colors. The use of barycentric coordinates in geometry and topology is not discussed. (EAM) #25.3.59

Huber-Dyson, Verena. See #25.3.48.

Huddleston, Philip. See #25.3.122.

Imbert, Claude. See #25.3.12.

Jacobi, Carl Gustav J. *Vorlesung über analytische Mechanik: Berlin 1847/48*. Braunschweig/Wiesbaden: Vieweg, 1996, lxx + 353 pp., DM 98. The lecture notes for Jacobi's course on analytical mechanics given during the winter 1847–1848 semester, based on class notes taken by Wilhelm Scheibner (1826–1907) and edited, with commentary, by Helmut Pulte. (DEZ) #25.3.60

Jakobsen, Ivan Tafteberg. The Geometry behind the Dome of the Cathedral in Florence [in Danish], *Normat* **44** (1996), 102–120, 143. The seemingly odd features of the bricklaying pattern used in the construction of the dome of the cathedral of Florence is explained in terms of a “building-cone” from the early 1400s. (DEZ) #25.3.61

Janas, Jan; Olech, Czesław; and Szafraniec, Franciszek H. Włodzimierz Mlak (1931–1994), *Annales Polonici Mathematici* **66** (1997), 1–9. An account of the work of the Polish analyst, W. Mlak. The entire volume of this journal is concerned with Mlak's work in differential equations, differential inequalities, functional analysis, and operator theory. (DEZ) #25.3.62

Johnson, Norman L., and Kotz, Samuel, eds. *Leading Personalities in Statistical Sciences: From the 17th Century to the Present*, New York: Wiley, 1997, xxiii + 399 pp., paperbound, \$49.95. Brief biographies of the important contributors to probability and statistics from the Bernoulli family in the 17th century to Deming in the 20th. (DEZ) #25.3.63

Jury, Eliahu I. From J. J. Sylvester to Adolf Hurwitz: A Historical Review, in R. Jeltsch and M. Mansour, eds., *Stability Theory*, Basel: Birkhäuser, 1996, pp. 53–65. A history of various classical stability criteria for polynomials, leading up to that given in an 1895 theorem of Hurwitz. See the review by Joseph A. Ball in *Mathematical Reviews* **97i**:01016. (CJ) #25.3.64

Kaijser, Sten. The Curving Road to the Calculus [in Swedish], *Normat* **44** (1996), 121–128, 143. Consideration of two usually neglected aspects of the development of calculus: the evolution of the real number system and the fact that calculus was not the answer to problems studied by contemporaries of Newton and Leibniz. (DEZ) #25.3.65

Kailath, Thomas. See #25.3.25.

Kielkopf, Charles F. See #25.3.115.

Kleiner, Israel. A Historically Focused Course in Abstract Algebra, *Mathematics Magazine* **71** (1998), 105–111. Description of a master's-level, terminal course in algebra that is motivated by five concrete problems. With an approach that is genetic rather than strictly historical, the work of Peacock, Bachelier, Wantzel, Lagrange, and Hamilton comes to the fore. (DEZ) #25.3.66

Kolmogorov, A. N., and Yushkevich, A. P., eds. *Mathematics of the 19th Century: Constructive Function Theory According to Chebyshev, Ordinary Differential Equations, Calculus of Variations, Theory of Finite Differences*, Boston/Basel/Berlin: Birkhäuser, 1998, 363 pp., hardbound, \$98. The third and final volume of the famous work translated from Russian into English. This volume includes an essay on the development of Chebyshev's theory of approximation of functions, later called "constructive function theory," a systematic analysis of the history of the theory of ordinary differential equations from Cauchy and his predecessors up to Poincaré and A. M. Lyapunov, an essay on the development of the calculus of variations, and a study of the history of finite differences, in whose development mathematicians from the former Soviet Union played a prominent role. Volume 1 was abstracted in #20.1.58 and Volume 2 in #24.2.117. (DEZ) #25.3.67

Kostant, Bertram. See #25.3.25.

Kotz, Samuel. See #25.3.63.

Krantz, Steven G. See #25.3.101.

Krasnov, Kirill V. See #25.3.6.

Kusuba, Takanori. See #25.3.55.

Lam, T. Y. Representations of Finite Groups: A Hundred Years, Part I, *Notices of the American Mathematical Society* **45** (1998), 361–372. A historically laced expository article on the representation theory of finite groups beginning with the Frobenius-Dedekind *Briefwechsel* of 1896. The author explains how Frobenius's study of group determinants led first to characters, then to group representations, and then to a theory that exposed new properties of finite groups. (DEZ) #25.3.68

Lam, T. Y. Representations of Finite Groups: A Hundred Years, Part II, *Notices of the American Mathematical Society* **45** (1998), 465–474. A discussion of the life and work of the English mathematician and oarsman, William Burnside (1852–1927), the Burnside problems (a result of his "truly uncanny foresight" [p. 470]), and their influence on contemporary mathematics. The concluding part considers parallels between the lives and works of Burnside and Frobenius. (DEZ) #25.3.69

Laplace, Pierre-Simon. *Théorie analytique des probabilités. Vol. I*, Paris: Éditions Jacques Gabay, 1995, clxx + 194 pp. A reprint of the 1819 fourth edition of the Introduction to this classical work, titled "General Probability Theory," and a reprint of the 1820 third edition of Book I, "On the Calculus of Generating Functions." See *Mathematical Reviews* **97i**:01052a, where A. I. Dale writes, "In view of the comparative scarcity of copies of the complete collection of Laplace's works, I have chosen to give a fairly detailed discussion of this most important work." (DEZ) #25.3.70

Laplace, Pierre-Simon. *Théorie analytique des probabilités. Vol. II*, Paris: Éditions Jacques Gabay, 1995, xviii + 497 pp. A reprint of the 1820 third edition of Book II, "General Probability Theory," and of four supplements. See the review by A. I. Dale in *Mathematical Reviews* **97i**:01052b. (DEZ) #25.3.71

Leonard, Robert J. Ethics and the Excluded Middle: Karl Menger and Social Science in Interwar Vienna, *Isis* **89** (1998), 1–26. An account of the social science activities of the Austrian mathematician, Karl Menger, (1902–1985) for the decade before he fled to the U. S. in 1937. The author explains how mathematical, social scientific, and political debates were deeply intertwined in the Vienna Circle on the eve of Hitler's arrival. Noteworthy is the fact that Menger's dissertation advisor was the Viennese socialist mathematician, Hans Hahn. (DEZ) #25.3.72

Liebscher, Dierck-E. See #25.3.6.

Lorentz, R. A., ed. *Mathematics from Leningrad to Austin, Vol. 1: G. Lorentz's Selected Works in Real, Functional and Numerical Analysis*, Boston: Birkhäuser, 1997, 680 pp., hardbound, \$110. This volume contains the selected published works of George G. Lorentz in real functional analysis and approximation theory, a bibliography, an overview of his books by T. Erdelyi and P. Nevai, and two commentaries on his work: C. Bennet, "The Mathematical Works of G. G. Lorentz in Real and Functional Analysis," and H. Berens, "G. G. Lorentz and Approximation Theory." (DEZ) #25.3.73

Lorentz, R. A., ed. *Mathematics from Leningrad to Austin, Vol. 2: G. Lorentz's Selected Works in Real, Functional and Numerical Analysis*, Boston: Birkhäuser, 1997, 584 pp., hardbound, \$110. This volume contains the selected published works of George G. Lorentz in summability, number theory, and interpolation theory, an autobiography, a list of Lorentz's doctoral students, several previously unpublished essays, and two commentaries on his work: S. Baron and D. Leviatan, "G. G. Lorentz and the Theory of Summability," and S. D. Riemenschneider, "The Work of G. G. Lorentz on Birkhoff Interpolation." (DEZ) #25.3.74

Lubinsky, Doron S. See #25.3.123.

Luzin, N. N. Function: Part I, *The American Mathematical Monthly* **105** (1998), 59–67. A translation by Abe Shenitzer of an encyclopedia article that appeared in the 1930s written by the famed Russian analyst, N. N. Luzin, on the evolution of the function concept from the vibrating string problem through the work of Fourier. (DEZ) #25.3.75

Maassen, J. D. M., and Steutel, F. W. Remembering Wim Vervaat, *Statistica Neerlandica* **50** (1996), 225–230. An obituary of the Dutch statistician, Wim Vervaat (1942–1994), with a photo. See also #25.3.89. (DEZ) #25.3.76

Magenes, Enrico. Giuseppe Scorza [in Italian], *Bollettino della Unione matematica italiana* (Serie VII) **11** (1997), 207–216. An account of the work of the Italian mathematician, G. Scorza (1908–1996), with a list of his publications. (DEZ) #25.3.77

Malet, Antoni. *From Indivisibles to Infinitesimals: Studies on Seventeenth-Century Mathematization of Infinitely Small Quantities*, Barcelona: Universitat Autònoma de Barcelona, 1996, 163 pp., paperbound. (DEZ) #25.3.78

Malyshev, V. A., and Minlos, Robert A. Roland Lvovich Dobrushin (1929–1995) [in Russian], *Markov Processes and Related Fields* **1** (1995), 447–458. An account of the work of the Russian mathematician, R. L. Dobrushin, with a list of his publications. See also #25.3.85. (DEZ) #25.3.79

Mann, Avinoam. Shimshon Avraham Amitsur (1921–1994), *Israel Journal of Mathematics* **96** (1996), ix–xxvii. An account of the work of the Israeli algebraist, S. A. Amitsur, with a list of his publications and a photo. (DEZ) #25.3.80

Martin, Thierry. *Probabilités et critique philosophique selon Cournot*, Paris: Librairie philosophique J. Vrin, 1996, 362 pp., paperbound. The contributions of Cournot to probability and critical philosophy. See also #24.1.116. (DEZ) #25.3.81

Martinović, Ivica. America: A Challenge for Ruđer Bošković the Geodesist [in Croatian], *Anali Zavoda za povijesne znanosti HAZU u Dubrovniku* **35** (1997), 173–184. An analysis of Bošković's geodetic

research between 1747 and 1770 that involves data from both North and South America, particularly regarding his method for the adjustment of discordant observations. (IM) #25.3.82

Maz'ya, Vladimir, and Shaposhnikova, Tatyana. *Jacques Hadamard: A Universal Mathematician*, trans. Peter Basarab-Horvath, Providence/London: American Mathematical Society/London Mathematical Society, 1998, xxv + 274 pp., hardbound, \$79. An account of the life and work of the French mathematician, Jacques Hadamard (1865–1963). The first part of the book expands the original 1990 biography with material based on documentation and correspondence not available to the authors at that time. The second part, which presents Hadamard's contributions, reflects the chronological order of his research interests. Some parts revise and extend the earlier work. (DEZ) #25.3.83

Meheus, Joke. Adaptive Logic in Scientific Discovery: The Case of Clausius, in Diderik Batens, ed., *Conference on Philosophical Logic*, 1996, pp. 359–391. Explains how Clausius's mechanical theory of heat in 1850 superseded two earlier, inconsistent theories, those of Carnot and Joule. See the review by Eri Yagi in *Mathematical Reviews* **97i**:01019. (CJ) #25.3.84

Minlos, Robert A.; Shlosman, S.; and Sinai, Jakov G. Obituary: Roland L. Dobrushin (1929–1995), *Ergodic Theory and Dynamical Systems* **16** (1996), 863–869. An account of R. L. Dobrushin's work in ergodic theory and dynamical systems. See also #25.3.79. (DEZ) #25.3.85

Minlos, Robert A. See also #25.3.79.

Monk, Martin, and Osborne, Jonathan. Placing the History and Philosophy of Science on the Curriculum: A Model for the Development of Pedagogy, *Science Education* **81** (1997), 405–424. Two main issues for those wishing to introduce the history and philosophy into science teaching are the justification and the placement of materials. The justification must point to places where the inclusion of history will directly contribute to the learning of science concepts. Materials must support teachers' main aims and the understanding of science education as epistemological justification, rather than seem bolted on in a context of discovery. (JGF) #25.3.86

Moore, Calvin C. See #25.3.25.

Morawiec, A. See #25.3.48.

Mukherjee, S. P. Homage to a Departed Leader, *IAPQR Transactions* **20** (1995), i–vi. An obituary of the mathematician, Purnendu Kumar Bose (1916–1993), not to be confused with the statistician, Raj Chandra Bose. (DEZ) #25.3.87

Nauenberg, Michael. Hooke's 1685 Manuscript on Orbital Mechanics, *Historia Mathematica* **25** (1998), 89–93. A letter to the editor providing additional evidence for the writer's interpretation of Hooke's work in contradistinction to an interpretation by Herman Erlichson. See #24.4.63. (DEZ) #25.3.88

Neumann, Peter. See #25.3.112.

O'Brien, G. L. The Research of Wim Vervaat, *Statistica Neerlandica* **50** (1996), 231–241. A discussion of the motivating questions in the work of the Dutch statistician, Wim Vervaat, including the central role played by sup measures and capacities. See also #25.3.76. (DEZ) #25.3.89

Odifreddi, Piergiorgio, ed. *Kreiseliana: About and Around Georg Kreisel*, Natick, MA: AK Peters, 1996, 512 pp., hardbound, \$60.00. A collection of essays, reminiscences, and professional papers that pay tribute to the logician and mathematical philosopher, Georg Kreisel. The book aims to communicate Kreisel's personal and intellectual influence. (DEZ) #25.3.90

Ofir, Ron, and Arcavi, Abraham. Word Problems and Equations: An Historical Activity for the Algebra Classroom, *Mathematical Gazette* **76** (475) (1992), 69–84. A history of algebra activity for junior high school students (aged 12–14), relating to problems that reduce (in modern terms) to $ax = b$, taking the form of a teacher-directed presentation/discussion with accompanying transparencies and worksheet. (JGF) #25.3.91

Olech, Czesław. *See* #25.3.62.

Osborne, Jonathan. *See* #25.3.86.

Oshin, B. Adetokunbo. *Brief History of Mathematics*, Ijebu-Igbo (Nigeria): TWD Publications, 1995, 88 pp. A short history of mathematics for teachers. (PG) #25.3.92

Otero, Mario H. *Joseph-Diez Gergonne (1771–1859): Histoire et philosophie des sciences*, Nantes: Centre François Viète, 1997, 260 pp., FF 60. A book on the history and philosophy of J.-D. Gergonne, especially his contributions to logic. (DEZ) #25.3.93

Palladino, Franco. *See* #25.3.35.

Palombi, Fabrizio. *See* #25.3.101.

Pambuccian, Victor V. *See* #25.3.17.

Pelczar, Andrzej. Mathematics in Poland at the Start of the Polish Mathematical Society (and Somewhat Earlier) [in Polish], *Wiadomości Matematyczne* **32** (1996), 137–152. Outlines the history of mathematics in Poland from 1803 to 1919, emphasizing the role of Cracow. (EAM) #25.3.94

Perkins, Sarah. *See* #25.3.29.

Pingree, David. *See* #25.3.21.

Pulte, Helmut. *See* #25.3.60.

Pycior, Helena M. *Symbols, Impossible Numbers, and Geometric Entanglements: British Algebra Through the Commentaries on Newton's Universal Arithmetick*, Cambridge/New York: Cambridge Univ. Press, 1997, xii + 328 pp. (DEZ) #25.3.95

Ransom, Peter. Hutton's Recreations, *BSHM Newsletter* **36** (1998), 36–39. An explication of two problems by Charles Hutton (1737–1823) related to sundials. (DEZ) #25.3.96

Rashed, Roshdi. *See* #25.3.16.

Reich, Karin. Die Rezensionen von Gauß in den Göttingischen Gelehrten Anzeigen, *Gauss-Gesellschaft e. V. Göttingen. Mitteilungen* **33** (1996), 21–41. Provides a complete list of Gauss' mathematical works reviewed in the early 19th century (nearly all written between 1808 and 1830), cross-indexed by author. The author summarizes the general contents of the reviews and provides extensive details on some. See the review by R. L. Cooke in *Mathematical Reviews* 97k:01014. (EAM) #25.3.97

Renn, Jürgen. *See* #25.3.31.

Rice, Adrian. From Student to Professor: The Story of Sylvester at UCL, *De Morgan Association Newsletter* **5** (1997), 4–5. University College London witnessed the very beginning of James Joseph Sylvester's mathematical career—from his brief period as an unruly student in 1828 to his four-year tenure of the college's professorship of natural philosophy a decade later. Yet, although his association with UCL was relatively short-lived, he retained an enduring fondness for the college that had witnessed his development from a rebellious teenager to a professional mathematician. (ACR) #25.3.98

Rice, Adrian. G. H. Hardy 1877–1947, *BSHM Newsletter* **36** (1998), 10–16. Report of a meeting held December 1997 at Oxford to mark the 50th anniversary of the death of G. H. Hardy, including abstracts of the three major papers presented by Robin J. Wilson and by Hardy students Frank Smithies and Robert A. Rankin. (DEZ) #25.3.99

Rice, Adrian. The European Honours Course in History of Mathematics 1997, *BSHM Newsletter* **36** (1998), 56–60. Description of a three-week course led by Ivor Grattan-Guinness in July 1997 with the theme of “Mathematical Education and Institutions.” (DEZ) #25.3.100

Ritter, Jim. *See* #25.3.50.

Roberts, Don D. *See* #25.3.58.

Rota, Gian-Carlo. *Indiscrete Thoughts*, Boston: Birkhäuser, 1997, 296 pp., softbound, \$36.50. A collection of essays edited by Fabrizio Palombi that recalls some of G.-C. Rota's days at Princeton and Yale from the 1950s and espouses some of his opinions about mathematics. There is also a tribute to Jacob Schwartz. *See* the review by Steven G. Krantz in *Notices of the AMS* **44** (1997), 824–827. (DEZ)

#25.3.101

Saliba, George. *See* #25.3.22.

Samsó, Julio. *See* #25.3.22.

Shaposhnikova, Tatyana. *See* #25.3.83.

Shea, William R. *See* #25.3.119.

Shlosman, S. *See* #25.3.85.

Simms, Dennis L. Archimedes and the Burning Mirrors at Syracuse, *Technology and Culture* **16** (1977), 1–18. A summary and analysis of the historical, military, and scientific evidence for and against Archimedes using burning mirrors at the siege of Syracuse. The conclusion is that Archimedes did not use, would not use, and could not have used burning mirrors as a weapon of war. (DLS)

#25.3.102

Simms, Dennis L. Archimedes and the Invention of Artillery and Gunpowder, *Technology and Culture* **28** (1987), 67–79. Although Petrarch was Archimedes' first serious biographer and Robertus Valuturius drew on Plutarch, they both attributed the invention of the cannon to Archimedes; Tartaglia added gunpowder. Despite the absurdity, the attribution did not fall out of favor until the end of the 17th century. (DLS)

#25.3.103

Simms, Dennis L. Galen on Archimedes: Burning Mirror or Burning Pitch? *Technology and Culture* **32** (1991), 91–96. Galen (*De Temp.*3.2) referred to *pyreion* being used by Archimedes to destroy the Roman fleet. Its meaning is shown to be most likely to be some sort of burning pitch, but the reference established the legend of the burning mirrors in mid-15th-century Europe. (DLS)

#25.3.104

Simms, Dennis L. Problema Archimedeae, *Technology and Culture* **30** (1989), 177–178. Cicero used the expression *Problema Archimedeae*, translated as “something practically impossible” or as one for “a Philadelphia lawyer,” when faced with the task of giving Scipio's funeral oration in front of Caesar, Scipio's enemy. Being Cicero, he solved it. (DLS)

#25.3.105

Simms, Dennis L. Santa Lucia and Archimedes, *CA News: The Classical Association* **13** (1995), 9–10. Rivault, the distinguished French mathematician and an early editor of Archimedes' papers, recorded that Santa Lucia was a descendant of Archimedes. The history of this most bizarre of all Archimedean legends is summarized. (DLS)

#25.3.106

Simms, Dennis L., and Bryden, D. J. Archimedes as an Advertising Symbol, *Technology and Culture* **34** (1993), 387–392. Prominent London opticians for more than a century after 1670 sold their goods from shops having Archimedes as part of their name. This use of his name shows that Archimedes had entered the pantheon of heroes by then; confirming evidence is noted. (DLS)

#25.3.107

Simms, Dennis L., and Hinkley, P. L. Brighter Than How Many Suns: Sir Isaac Newton's Burning Mirror, *Notes and Records of the Royal Society of London* **43** (1989), 31–51. Newton designed and presented a burning mirror made from seven spherical mirrors, arranged in the form of a spherical surface, to the Royal Society. Halley was commanded to prepare a description; he never did so and the mirrors were lost. The mirror is described and its effectiveness assessed. (DLS)

#25.3.108

Sinai, Jakov G. *See* #25.3.85.

Singmaster, David. Mathematical Gazetteer of Britain #8: Eaglesfield to Guildford, *BSHM Newsletter* **36** (1998), 26–35. A continuation of the author's series of short descriptions of British mathematicians and mathematical sites, featuring detailed entries on Edinburgh and Glasgow. (DEZ)

#25.3.109

Siraisi, Nancy G. *The Clock and the Mirror: Girolamo Cardano and Renaissance Medicine*, Princeton: Princeton Univ. Press, 1997, xiv + 362 pp., \$49.50, £37.50. The author draws on selected themes in Cardano's medical writings to explore the relation between medicine and wider areas of Renaissance culture, though mathematics plays only a minor role. (DEZ) #25.3.110

Smarandache, Florentin. *Fugit ... Jurnal de lagăr* [in Romanian], Bucharest: Editura Tempus, 1994, 288 pp., paperbound. The recollections of an exiled mathematician who was in a political refugee camp in Turkey for almost two years during 1988–1990. (SC) #25.3.111

Smithies, Frank. *Cauchy and the Creation of Complex Function Theory*, Cambridge: Cambridge Univ. Press, 1997, 216 pp., £35. A detailed examination of Cauchy's work between 1814 and 1831 on complex function theory. See the review by Peter Neumann in *BSHM Newsletter* **36** (1998), 24–26. (DEZ) #25.3.112

Spalt, Detlef D. Le continu de l'analyse classique dans la perspective du résultatisme et du génésio-logisme, in Jean-Michel Salanskis and Hourya Sinaceur, eds., *Le labyrinthe du continu*, Paris: Springer, 1992, pp. 85–95. The author examines the genesis of the notion of continuum in the 19th century from Bolzano (1811) to Cantor (1883). See the review by Pierre Crépel in *Mathematical Reviews* **97j**:01016. (HEK) #25.3.113

Spencer, Donald C. Kunihiko Kodaira (1915–1997), *Notices of the American Mathematical Society* **45** (1998), 388–389. A tribute to the Japanese topologist and Fields Medal winner, Kunihiko Kodaira. (DEZ) #25.3.114

Stackel, John. See #25.3.31.

Steutel, F. W. See #25.3.76.

Szafraniec, Franciszek H. See #25.3.62.

Thiel, Christian. Paul Lorenzen (1915–1994), *Journal of General Philosophy of Science* **27** (1996), 1–13. A synopsis of an academic who made significant contributions to his field while leading his students to make their own contributions. See the review by Charles F. Kielkopf in *Mathematical Reviews* **97j**:01042. (HEK) #25.3.115

Trapp, J. B. Archimedes's Tomb and the Artists: A Postscript, *Journal of the Warburg and Courtauld Institutes* **53** (1990), 286–288. Describes and reproduces the paintings of the tomb by various artists, including one by Benjamin West, the American painter and successor to Sir Joshua Reynolds as President of the Royal Academy. See also #25.2.126. (DLS) #25.3.116

Tsaban, Boaz, and Garber, David. On the Rabbinical Approximation of π , *Historia Mathematica* **25** (1998), 75–84. A discussion of three major rabbinical approaches to biblical and Talmudic values for π : rational-religious, mystical, and practical. (DEZ) #25.3.117

Tsao, Anna. See #25.3.25.

Van Evra, James. See #25.3.58.

Varadarajan, V. S. *Algebra in Ancient and Modern Times*, Providence/New Delhi: American Mathematical Society/Hindustan Book Agency, 1998, xvi + 142, paperbound, \$25. A historical approach to solving equations that includes results from ancient Greece, medieval India and Islamic countries, Renaissance Italy, and Gauss. (DEZ) #25.3.118

Vilain, Christiane. *La mécanique de Christian Huygens*, Paris: Albert Blanchard, 1996, viii + 287 pp., 480 FF. The author shows how Huygens developed Galileo's insights and radically transformed the laws of motion that Descartes had formulated in his *Principia philosophiae* of 1644. See the review by William S. Shea in *Mathematical Reviews* **97j**:01014. (HEK) #25.3.119

Voss, Waltraud. Dresdner Mathematik von 1920 bis 1938: Die Ära Kowalewski, *Wissenschaftliche Zeitschrift der Technischen Universität Dresden* **45** (6) (1966), 1–7. The development of mathematics in

Dresden during the Weimar Republic, 1920–1938. Emphasizes the role of Ära Kowalewski, the Lie group specialist who popularized mathematics with his textbooks, founded the Mathematics Colloquium, and exerted a positive influence on several women in mathematics. (DEZ) #25.3.120

Wang, Kai. *See* #25.3.124.

Wilson, Alistair Macintosh. *The Infinite in the Finite*, Cambridge: Cambridge Univ. Press, 1995, 538 pp., hardbound, £26.50. A book that presents the historical, geographical, and religious background to basic concepts in mathematics. It covers the geometry of stone circles in Europe, the area of triangles and volume of pyramids that concerned the engineers of the Pharaohs, the Babylonian sexagesimal number system and our present measures of space and time which grew out of it, the use of the abacus and remainder theory in China, Greek mathematics from Pythagoras to Pappus, the invention of trigonometry by Arab mathematicians, and the solution of quadratic equations by completing the square developed in India. (DEZ) #25.3.121

Yagi, Eri. *See* #25.3.84.

Yavetz, Ido. *From Obscurity to Enigma: The Work of Oliver Heaviside, 1872–1889*, Basel: Birkhäuser Verlag, 1995, x + 334 pp., \$89. This book focuses on Heaviside's professional life during the period 1872–1889. See the review by Philip Huddleston in *Mathematical Reviews* **97j**:01045. (HEK) #25.3.122

Yushkevich, A. P. *See* #25.3.67.

Zalik, Richard A., and Lubinsky, Doron S. Dedication: Tribute to Oved Shisha, *Journal of Approximation Theory* **86** (1996), 1–12. An appreciation of the life and work of the Israeli mathematician, Oved Shisha (1932–1998), with a list of his publications. Shisha, who founded the *Journal of Approximation Theory*, was struck by a vehicle in 1995 and remained in a coma until his death on April 17. (DEZ) #25.3.123

Zhang, Liang-Cheng. *See* #25.3.14.

Zhang, Yu Feng; Feng, Bin Lu; and Wang, Kai. A Comparative Study of the Mathematical Theories of Hui Liu and Euclid [in Chinese], *Journal of Luoyang University* **11** (1996), 22–25. A comparison of Liu's commentary on the *Jiu zhang suanshu* with Euclid's *Elements*. (DEZ) #25.3.124